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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/829,196

04/22/2004

Eiichi Matsuzaki

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09/02/2008

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

YENKE, BRIAN P

ART UNIT

PAPER NUMBER

2622

MAIL DATE

DELIVERY MODE

09/02/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/829,196	Applicant(s) MATSUZAKI ET AL.	
	Examiner BRIAN P. YENKE	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment (06/23/08).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19,21,24,25,27,30 and 31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) all the above is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to the claims have been considered but are not persuasive.

Applicant's Arguments

a) Applicant states that Hsu does not disclose/suggest determining whether motion information on an interpolation pixel is a moving image or a still image based on the motion information on a reference pixel adjacent to an interpolation pixel in a field of interest and the motion on a reference pixel in a field previous the field of interest and the motion information on a reference pixel in a next field following the field of interest, the reference pixels in the previous field and the next field being at the same position as the interpolation pixel in the field of interest, in combination with determining the motion information on the interpolation pixel in the field of interest as a moving image when the motion information on the reference pixel adjacent to the interpolation pixel in the field of interest indicates a moving image, or when both of the motion information on the reference pixel in the field previous to the field of interest and the motion information on the reference pixel in the next field indicate a moving image, and other determining a motion information on the interpolation pixel in the field of interest as a still image.

Examiner's Response

a) The examiner disagrees. As stated in the rejection Hsu determines the pixel value (motion value which indicates the amount of motion or not) between two references pixels at the same position in different fields (previous and next field (Fig 2, right and left of the interpolated pixel) and also the motion information of adjacent pixels (above and below) of the current field of the interpolated pixel, wherein all four values/information are used to determined the extent of motion or not (i.e. still) of the image.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 19,21,24-25, 27 and 30-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Hsu et al., US 6,847,405.

In considering claims 19, 25 and 31,

a) the claimed pixel information storing unit...is met by memory 104 and or 106 (Fig 1).

b) the claimed a reference pixel motion information generating unit...is met where the system determines the extent of motion being in the vertical direction or not (Fig 2, between pixel d and c) and the calculation on the horizontal motion or not between pixel a and b (Fig 2)

c) the claimed reference pixel motion information storing unit...is met where the data is stored in memory 104 and/or 106 (col 6, line 43-49).

d)-e) the claimed interpolation pixel determining unit...is met where the system determines the interpolation coefficient/method of interpolation based upon the motion information in the vertical and horizontal direction in order to perform either spatial (for fast moving scenes) or temporal interpolation (for still video scenes)(see col 5 line 57 to col 6 line 49 for description of Fig 2), using the pixel level motion strength interpolation of the field as shown (col 6, equation, lines 30-35). Hsu discloses a system which weights the interpolation coefficients in order to balance between temporal interpolation which is desired in the scenario of still video scenes (col 6, line 12-27) and spatial interpolation, the process desired in fast moving video scenes.

In considering claims 21, 24, 27 and 30,

Hsu discloses the determination of motion when motion is large (indicative of motion) or small (i.e. still) based upon the vertical direction (same field, above/below) and horizontal direction (previous, next field, same line as target/interpolated pixel, Fig 2).

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Yenke whose telephone number is (571)272-7359. The examiner work schedule is Monday-Thursday, 0730-1830 hrs.

The Special Programs Examiner (SPRE) handling this case is Michael Horabik (571)272-3068

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Sinh Tran, can be reached at (571)272-7564.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(571)-273-8300

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703)305-HELP.

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(FAX) 703-305-7786

(TDD) 703-305-7785

An automated message system is available 7 days a week, 24 hours a day providing informational responses to frequently asked questions and the ability to order certain documents. Customer service representatives are available to answer questions, send materials or connect customers with other offices of the USPTO from 8:30 a.m. - 8:00p.m. EST/EDT, Monday-Friday excluding federal holidays.

For other technical patent information needs, the Patent Assistance Center can be reached through customer service representatives at the above numbers, Monday through Friday (except federal holidays) from 8:30 a.m. to 5:00 p.m. EST/EDT.

The Patent Electronic Business Center (EBC) allows USPTO customers to retrieve data, check the status of pending actions, and submit information and applications. The tools currently available in the Patent EBC are Patent Application Information Retrieval (PAIR) and the Electronic Filing System (EFS).

PAIR (<http://pair.uspto.gov>) provides customers direct secure access to their own patent application status information, as well as to general patent information publicly available. EFS allows customers

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to electronically file patent application documents securely via the Internet. EFS is a system for submitting new utility patent applications and pre-grant publication submissions in electronic publication-ready form. EFS includes software to help customers prepare submissions in extensible Markup Language (XML) format and to assemble the various parts of the application as an electronic submission package. EFS also allows the submission of Computer Readable Format (CRF) sequence listings for pending biotechnology patent applications, which were filed in paper form.

/BRIAN P. YENKE/
Primary Examiner, Art Unit 2622

B.P.Y
19 August 2008

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